

UNIVERSITY OF NEBRASKA AGRICULTURAL ENGINEERING DEPARTMENT
 AGRICULTURAL COLLEGE, LINCOLN

Copy of Report of Official Tractor Test No. 153

Dates of test: October 22 to 29, 1928.

Name, model and rating of tractor: John Deere "General Purpose" 10 - 20.

Manufacturer: John Deere Tractor Co., Waterloo, Iowa.

B R A K E H O R S E P O W E R T E S T S

H. P.	:Crank :shaft :speed :R.P.M. :	Fuel Consumption :Gals. :per :hour	:H. P. :H.P. :H.P. :	:Lbs. @ :H.P. :hour	:Water consumption :per hour gallons :Cool-:In :ing :fuel :Total : : : :med.	:Temp. :Deg. F. :Cool- : :ing :Air :	:Barometer :Inches of :mercury :
OPERATING MAXIMUM LOAD TEST. ONE HOUR (97% of maximum load)							
24.97	: 948	: 2.721	: 9.18	: 0.741	: 1.54	: --	: 1.54 : 199 : 62 : 29.03
RATED LOAD TEST. ONE HOUR							
20.20	: 948	: 2.362	: 8.55	: 0.795	: 0.93	: --	: 0.93 : 197 : 62 : 29.03
VARYING LOAD TEST. TWO HOURS							
20.21	: 950.5	: 2.585	: 7.82	: 0.870	: --	: --	: -- : 195 : 56 : 5 : -----
1.25	: 1021.5	: 1.253	: 1.00	: 6.816	: --	: --	: -- : 173 : 60 : -----
10.52	: 984.5	: 1.429	: 7.36	: 0.924	: --	: --	: -- : 196.5 : 62.5 : -----
22.01	: 940.5	: 2.629	: 8.37	: 0.812	: --	: --	: -- : 198.5 : 63.5 : -----
5.26	: 979.5	: 1.341	: 3.92	: 1.734	: --	: --	: -- : 185.5 : 64 : -----
15.61	: 974.5	: 1.738	: 8.98	: 0.757	: --	: --	: -- : 199.5 : 65 : -----
* 12.70	: 975	: 1.829	: 6.94	: 0.980	: 0.48	: --	: 0.48 : 193 : 62 : 28.95

*The last line is the average for the two hours.

D R A W B A R H O R S E P O W E R T E S T S

H. P.	:Draw :Bar :pull :pounds :	:Speed :miles :per :hour	:Crank :shaft :speed :R.P.M. :	:Slip : on :drive :wheels : %	Fuel Consumption :Gal. :hr. :per :hour	:Water :used :Gal. :per :hour	:Temp. :Cool-:Air :ing : :med : :	:Barometer :Inches of :mercury :
RATED LOAD TEST. TEN HOURS. Intermediate Gear.								
10.20	: 1078	: 3.55	: 937	: 1.01	: 2.061	: 4.95	: 1.374 : 0.16 : 185 : 42 : 29.33	
MAXIMUM LOAD TEST								
16.85	: 1837.5	: 3.44	: 943	: 5.46	: --	: Net Recorded	: -- : 185 : 52 : 28.96	
17.24	: 2489	: 2.60	: 959	: 7.30	: "	: "	: : 196 : 52 : 28.86	
13.93	: 1060	: 4.93	: 945	: 2.03	: "	: "	: : 193.5 : 60 : 28.86	

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BRIEF SPECIFICATIONS

MOTOR: Make Own Serial No. 200112 Type 2 Cylinder horizontal
Head "L" Mounting Crosswise
Bore and stroke: 5 $\frac{3}{4}$ x 6 in. Rated R.P.M. 950
Port Dia. Valves: Inlet 2 $\frac{1}{4}$ " Exhaust 2 $\frac{1}{4}$ "
Belt pulley: Diam. 13 in. Face 6 $\frac{1}{2}$ in. R.P.M. 950
Magneto: Fairbanks-Morse Model "John Deere"
Carburetor: Ensign Model BJ Size 1 $\frac{1}{4}$ "
Governor: Own No. ----- Type Fly-Ball
Air Cleaner: Donaldson-Simplex Type Aux. Twister and Oil Fiber
Lubrication: Pressure

CHASSIS: Type 4 wheels Serial No. 200112 Drive Enclosed gear & chain
Clutch: Own Type Disc operated by hand
Advertised speeds, miles per hour: Low 2-1/3
Intermediate 3-1/8 High 4-1/3 Reverse 2
Drive wheels: Diameter 42 $\frac{3}{4}$ " Face 10"
Lugs: Type Spade No. per wheel 24 Size 4 $\frac{1}{2}$ "H x 3-1/8" x 3 $\frac{1}{8}$ "
Extension rims: Width ----- Seat Pressed steel
Total weight as tested (with operator) 4265 pounds.

FUEL AND OIL

Fuel: Kerosene Weight per gallon 6.80
Oil: Mobiloil A To fill crankcase 1 $\frac{1}{2}$ gallons
Additional amount used during test 4 $\frac{3}{4}$ gallons
Total number of hours of test 42

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REPAIRS AND ADJUSTMENTS

Before the operating maximum belt load test, oil was found to be leaking from around the flywheel end of the crankshaft. This was repaired by readjusting the gasket and tightening gasket cover plate.

REMARKS

The tests herein reported were conducted with one carburetor setting which remained unchanged throughout the tests. This condition should be recognized when comparing this test with any Nebraska test conducted prior to 1928.

In the advertising literature submitted with the specifications and application for test of this tractor we find no claims and statements which, in our opinion, are unreasonable or excessive.

The results of this test indicate that the rating of this tractor does not exceed the provisions of the tractor rating code of the American Society of Agricultural Engineers and the Society of Automotive Engineers.

We, the undersigned, certify that above is a true and correct report of official tractor test No. 153.

Lew Wallace
Engineer-in-Charge

Oscar W. Jones

Chauncey K. Smith
Board of Tractor Test Engineers